

Remarks

The above Amendments and these Remarks are in reply to the Office Action mailed August 12, 2004.

Claims 1-46, 49-51, 57-60, and 91-98 were pending in the Application prior to the outstanding Office Action. Claims 10-11, 13-19, 22-23, 29, 32-33, 40-46, 49-51, and 57-60 have been allowed. The Examiner rejected claims 1-9, 12, 20-21, 24-28, 30-31, 34-39, and 91-98. The present Response cancels claims 94-98, amends claims 1, 91, 92 and 93, and adds new claims 99 and 100, leaving for the Examiner's present consideration claims 1-46, 49-51, 57-60, 91-93, 99 and 100. Reconsideration of the rejections is requested.

I. REJECTION UNDER 35 U.S.C. §103(A) OVER *KOYANAGI* (U.S. PAT. NO. 5,471,064) IN VIEW OF *DUERIG, ET AL.* (U.S. PAT. NO. 4,831,614) AND *CARVER* (U.S. PAT. NO. 4,916,002)

Claims 1-9, 12, 24, 25, 30, 31, 34-36, 38, 39, and 91-98

The Examiner rejected Claims 1-9, 12, 24, 25, 30, 31, 34-36, 38, 39, and 91-98 under 35 U.S.C. §103(a) as unpatentable over *Koyanagi* in view of *Duerig* and *Carver*. The Applicant requests cancellation of Claims 94-98. The Applicant respectfully traverses the rejection of Claims 1-9, 12, 24, 25, 30, 31, 34-36, 38, 39, and 91-93.

The Examiner states that *Carver* teaches “(a) a moveable platform (cantilever) having a second substrate 32 comprising silicon dioxide (Figs. 6E and 8; column 5, lines 58 and 59).” See OA page 8, lines 13-16. The Applicant respectfully disagrees. The feature of *Carver* pointed out by the Examiner is a cantilever supporting a single tip, and not a platform. As recited in Claims 1 and 91-93, the moveable read/write mechanism includes “a plurality of cantilevers *associated* with the moveable read/write platform” (Emphasis added). Nowhere does *Carver* describe “a moveable platform having a second substrate comprising silicon dioxide.”

Nevertheless, Applicants have amended Claims 1 and 91-93 to further clarify the structure claimed. Claims 1 and 91-93 recite “a moveable read/write platform having a second substrate *consisting essentially*

of silicon dioxide...wherein said first and second substrate expand at substantially the same rate over an operating temperature.” As the U.S. Court of Appeals for the Federal Circuit has stated in a recent decision, the phrase “consisting essentially of” has “long been understood to permit inclusion of components not listed in the claim, *provided that they do not ‘materially affect the basic and novel properties of the invention.’*” See *AK Steel Corp. v. Sollac*, 68 USPQ2d 1280, 1283 (citing *PPG Indus. v. Guardian Indus. Corp.*, 156 F.3d 1351, 1354 [48 USPQ2d 1351] (Fed. Cir. 1998); *In re Janakirama-Rao*, 317 F.2d 951, 954 [137USPQ 893] (CCPA 1963)). Referring to Figure 8, *Carver* describes a cantilever including a silicon dioxide layer 32, a silicon nitride layer 34, and a conductive layer of gold 52. See Col. 6, lines 40-50. By layering the cantilever as shown in Figure 8, with a silicon nitride layer 34, and a layer of gold 52 overlaying the silicon nitride layer 34, the thermal expansion properties of the silicon dioxide layer are materially affected. Therefore, even if the cantilever of *Carver* could be considered a platform, notwithstanding the arguments provided above arguing that the cantilever of *Carver* is not a platform, *Carver* further fails to teach or suggest a structure “consisting essentially of silicon dioxide” as recited in Claims 1 and 91. For the same reasons, *Carver* fails to teach or suggest a structure “consisting essentially of an oxide” as recited in Claim 92, and fails to teach or suggest a structure “consisting essentially of an insulator” as recited in Claim 93.

In order to render a claim obvious under 35 U.S.C. §103(a), the cited references must teach or suggest all of the features of the claim. The cited references fail to teach or suggest all of the features of Claim 1 and 91-93 because they fail to teach or suggest “a moveable read/write platform having a second substrate consisting essentially of silicon dioxide” as recited in Claims 1 and 91, “a moveable read/write platform having a second substrate consisting essentially of an oxide” as recited in Claim 92, or “a moveable read/write platform having a second substrate consisting essentially of an insulator” as recited in Claim 93. Since *Koyanagi* in view of *Duereg* and *Carver* fails to teach or suggest all of the features of Claims 1 and 91-93, *Koyanagi* in view of *Duereg* and *Carver* cannot render Claims 1 and 91-93 obvious under 35 U.S.C. §103(a). Dependent claims have at least the features of the independent claim from which they ultimately

depend; therefore, *Koyanagi* in view of *Duerig* and *Carver* cannot render dependent claims 2-9, 12, 24, 25, 30, 31, 34-36, 38 and 39 (which ultimately depend from Claim 1) obvious under 35 U.S.C. §103(a). Accordingly, the Applicant respectfully requests the withdrawal of this rejection.

II. REJECTION UNDER 35 U.S.C. §103(A) OVER *KOYANAGI* IN VIEW OF *DUERIG* AND *CARVER* AND FURTHER IN VIEW OF *ADDERTON, ET AL.* (U.S. PAT. NO. 6,196,061)

Claims 20 and 21

The Examiner rejected Claims 20 and 21 under 35 U.S.C. §103(a) as unpatentable over *Koyanagi* in view of *Duerig* and *Carver* and further in view of *Adderton*. The Applicant respectfully traverses the rejection.

The Examiner states that “Claims 20 and 21 are rejected under 35 U.S.C. 103 (a) as being unpatentable over *Koyanagi et al.*...in view of *Duerig*...in view of *Carver*...and further in view of *Adderton*...*Koyanagi* teaches a memory apparatus very similar to that of the present invention.” Dependent claims have at least the features of the independent claim from which they ultimately depend. Claims 20 and 21 ultimately depend from Claim 1; therefore, for the reasons given above in regard to Claims 1 and 91-93, *Koyanagi* in view of *Duerig* and *Carver* cannot render dependent Claims 20 and 21 obvious under 35 U.S.C. §103(a). *Adderton* fails to remedy this deficiency. Referring to Figure 3, *Adderton* describes “first and second cantilever beams **32** and **34** are each fixed at one end **36, 38**, respectively, to a cantilever substrate **40** and are free to deflect at a corresponding opposite end **42, 44**, respectively” See col. 7, lines 30-35. Referring to Figure 7, *Adderton* describes “cantilever **161** extends outwardly from a rigid die/substrate **164** that is used for handling and mounting the cantilever *into the microscope*” (Emphasis added). See col. 10, lines 28-33. Nowhere does *Adderton* teach or suggest “a moveable read/write platform having a second substrate consisting essentially of silicon dioxide” as recited in Claim 1.

Since *Koyanagi* in view of *Duerig* and *Carver* and further in view of *Adderton* fail to teach or suggest all of the features of Claim 1, from which Claims 20 and 21 ultimately depend, *Koyanagi* in view

of *Duerig* and *Carver* and further in view of *Adderton* cannot render dependent Claims 20 and 21 obvious under 35 U.S.C. §103(a). Accordingly, the Applicant respectfully requests the withdrawal of this rejection.

III. REJECTION UNDER 35 U.S.C. §103(A) OVER *KOYANAGI* IN VIEW OF *DUERIG* AND *CARVER* AND FURTHER IN VIEW OF *MAMIN, ET AL.* (U.S. PAT. NO. 5,804,710)

Claims 26 and 27

The Examiner rejected Claims 26 and 27 under 35 U.S.C. §103(a) as unpatentable over *Koyanagi* in view of *Duerig* and *Carver* and further in view of *Mamin*. The Applicant respectfully traverses the rejection.

The Examiner states that “Claims 26 and 27 are rejected under 35 U.S.C. 103 (a) as being unpatentable over *Koyanagi*....in view of *Duerig*...in view of *Carver*...and further in view of *Mamin*...*Koyanagi* in view of *Duerig et al.* and *Carver* teach a memory apparatus very similar to that of the present invention.” Dependent claims have at least the features of the independent claim from which they ultimately depend. Claims 26 and 27 ultimately depend from Claim 1; therefore, for the reasons given above in regard to Claim 1, *Koyanagi* in view of *Duerig* and *Carver* cannot render dependent Claims 26 and 27 obvious under 35 U.S.C. §103(a). *Mamin* fails to remedy this deficiency. Referring to Figure 5, *Mamin* describes a “cantilever base 20 is glued to the slanted flat 206. The cantilever 23 with stylus 19 on its free end is an extension of cantilever base 20.” See, col. 6, lines 64-66. Nowhere does *Mamin* teach or suggest “a moveable read/write platform having a second substrate consisting essentially of silicon dioxide” as recited in Claim 1.

Since *Koyanagi* in view of *Duerig* and *Carver* and further in view of *Mamin* fail to teach or suggest all of the features of Claim 1, from which Claims 26 and 27 ultimately depend, *Koyanagi* in view of *Duerig* and *Carver* and further in view of *Mamin* cannot render dependent Claims 26 and 27 obvious under 35 U.S.C. §103(a). Accordingly, the Applicant respectfully requests the withdrawal of this rejection.

IV. REJECTION UNDER 35 U.S.C. §103(A) OVER *KOYANAGI* IN VIEW OF *DUERIG* AND *CARVER* AND FURTHER IN VIEW OF *MIYAZAKI, ET AL.* (U.S. PAT. NO. 5,412,597)

Claim 28

The Examiner rejected Claim 28 under 35 U.S.C. §103 (a) as unpatentable over *Koyanagi* in view of *Duerig* and *Carver* and further in view of *Miyazaki*. The Applicant respectfully traverses the rejection.

The Examiner states that “Claim 28 is rejected under 35 U.S.C. 103 (a) as being unpatentable over *Koyanagi*....in view of *Duerig*...in view of *Carver*...and further in view of *Miyazaki*... *Koyanagi* in view of *Duerig* and *Kley* teach a memory apparatus very similar to that of the present invention.” Dependent claims have at least the features of the independent claim from which they ultimately depend. Claim 28 ultimately depends from Claim 1; therefore, for the reasons given above in regard to Claim 1, *Koyanagi* in view of *Duerig* and *Carver* cannot render dependent Claim 28 obvious under 35 U.S.C. §103(a). *Miyazaki* fails to remedy this deficiency. Referring to Figure 16, *Miyazaki* describes “cantilever units 131, 132, and 133 are formed on a silicon substrate 140.” See col. 19, lines 39-41. Nowhere does *Miyazaki* teach or suggest “a moveable read/write platform having a second substrate consisting essentially of silicon dioxide” as recited in Claim 1.

Since *Koyanagi* in view of *Duerig* and *Carver* and further in view of *Miyazaki* fail to teach or suggest all of the features of Claim 1, from which Claim 28 ultimately depends, *Koyanagi* in view of *Duerig* and *Carver* and further in view of *Miyazaki* cannot render dependent Claim 28 obvious under 35 U.S.C. §103(a). Accordingly, the Applicant respectfully requests the withdrawal of this rejection.

V. REJECTION UNDER 35 U.S.C. §103(A) OVER *KOYANAGI* IN VIEW OF *DUERIG* AND *CARVER* AND FURTHER IN VIEW OF *TANAKA* (U.S. PAT. NO. 5,808,973)

Claim 37

The Examiner rejected Claim 37 under 35 U.S.C. §103(a) as unpatentable over *Koyanagi* in view of *Duerig* and *Carver* and further in view of *Tanaka*. The Applicant respectfully traverses the rejection.

The Examiner states that “Claim 28 is rejected under 35 U.S.C. 103 (a) as being unpatentable over Koyanagi....in view of Duerig...in view of Carver...and further in view of Tanaka... Koyanagi in view of Duerig and Carver teach a memory apparatus very similar to that of the present invention.” Dependent claims have at least the features of the independent claim from which they ultimately depend. Claim 37 ultimately depends from Claim 1; therefore, for the reasons given above in regard to Claim 1, *Koyanagi* in view of *Duerig* and *Carver* cannot render dependent Claim 37 obvious under 35 U.S.C. §103(a). *Tanaka* fails to remedy this deficiency. Referring to Fig. 1, *Tanaka* describes a magnetic recording head **2** positioned over a rotating medium **1**. Nowhere does *Tanaka* teach or suggest “a moveable read/write platform having a second substrate consisting essentially of silicon dioxide” as recited in Claim 1.

Since *Koyanagi* in view of *Duerig* and *Carver* and further in view of *Tanaka* fail to teach or suggest all of the features of Claim 1, from which Claim 37 ultimately depends, *Koyanagi* in view of *Duerig* and *Carver* and further in view of *Tanaka* cannot render dependent Claim 37 obvious under 35 U.S.C. §103(a). Accordingly, the Applicant respectfully requests the withdrawal of this rejection.

VI. ALLOWABLE SUBJECT MATTER

Claims 10, 11, 13-19, 22, 23, 29, 32, 33, 40-46, 49-51 and 57-60

Applicant appreciates the indication that claims 10, 11, 13-19, 22, 23, 29, 32, 33, 40-46, 49-51 and 57-60 are allowed.

VII. ADDITIONAL CLAIMS

Claims 99 and 100

The newly added claims are, it is submitted, allowable over the cited art.


VIII. CONCLUSION

In light of the above, it is respectfully submitted that all of the claims now pending in the subject patent application should be allowable, and a Notice of Allowance is requested. The Examiner is respectfully requested to telephone the undersigned if he can assist in any way in expediting issuance of a patent.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 06-1325 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

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